



OICE

RAW SEQUENCE LISTING

DATE: 07/09/2002

PATENT APPLICATION: US/10/040,394

TIME: 16:10:45

Input Set : A:\PTO.VSK.TXT

Output Set: N:\CRF3\07092002\J040394.raw

ENTERED

3 <110> APPLICANT: Soe, Jorn
 4 Poulsen, Charlotte
 5 Rasmussen, Preben
 6 Madrid, Susan
 7 Zargahi, Masoud
 9 <120> TITLE OF INVENTION: Improved Method for Preparing Flour Doughs and Products Made
 From Such
 10 Doughs Using a Glycerol Oxidase
 12 <130> FILE REFERENCE: 674509-2045.1
 14 <140> CURRENT APPLICATION NUMBER: US 10/040,394
 C--> 15 <141> CURRENT FILING DATE: 2002-06-21
 17 <150> PRIOR APPLICATION NUMBER: US 09/402,664
 18 <151> PRIOR FILING DATE: 1998-04-03
 20 <150> PRIOR APPLICATION NUMBER: PCT/DK98/00136
 21 <151> PRIOR FILING DATE: 1998-04-03
 23 <150> PRIOR APPLICATION NUMBER: DK 0400/97
 24 <151> PRIOR FILING DATE: 1997-04-09
 26 <160> NUMBER OF SEQ ID NOS: 22
 28 <170> SOFTWARE: PatentIn version 3.1
 30 <210> SEQ ID NO: 1
 31 <211> LENGTH: 25
 32 <212> TYPE: PRT
 33 <213> ORGANISM: Aspergillus tubingensis
 35 <220> FEATURE:
 36 <221> NAME/KEY: MISC_FEATURE
 37 <222> LOCATION: (22)..(22)
 38 <223> OTHER INFORMATION: "Xaa" can be any amino acid
 41 <400> SEQUENCE: 1
 43 Ser Val Ser Thr Ser Thr Leu Asp Glu Leu Gln Leu Phe Ala Gln Trp
 44 1 5 10 15
 W--> 47 Ser Ala Ala Ala Tyr Xaa Ser Asn Asn
 48 20 25
 51 <210> SEQ ID NO: 2
 52 <211> LENGTH: 7
 53 <212> TYPE: PRT
 54 <213> ORGANISM: Aspergillus tubingensis
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 59 1 5
 62 <210> SEQ ID NO: 3
 63 <211> LENGTH: 14
 64 <212> TYPE: PRT
 65 <213> ORGANISM: Aspergillus tubingensis
 67 <400> SEQUENCE: 3

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69 Ala Trp Glu Ser Ala Ala Asp Glu Leu Thr Ser Lys Ile Lys

70 1 5 10

73 <210> SEQ ID NO: 4

74 <211> LENGTH: 20

75 <212> TYPE: DNA

76 <213> ORGANISM: Artificial Sequence

78 <220> FEATURE:

79 <223> OTHER INFORMATION: PCR primer used for PCR amplification of a fragment of the

lipase

80 gene

82 <220> FEATURE:

83 <221> NAME/KEY: misc_feature

84 <222> LOCATION: (9)..(9)

85 <223> OTHER INFORMATION: "n" can be a or t/u or g or c

88 <220> FEATURE:

89 <221> NAME/KEY: misc_feature

90 <222> LOCATION: (12)..(12)

91 <223> OTHER INFORMATION: "n" can be a or t/u or g or c

94 <220> FEATURE:

95 <221> NAME/KEY: misc_feature

96 <222> LOCATION: (18)..(18)

97 <223> OTHER INFORMATION: "n" can be a or t/u or g or c

100 <400> SEQUENCE: 4

Wt-> 101 ttccaraanc cngtrtgnac 20

104 <210> SEQ ID NO: 5

105 <211> LENGTH: 18

106 <212> TYPE: DNA

107 <213> ORGANISM: Artificial Sequence

109 <220> FEATURE:

110 <223> OTHER INFORMATION: PCR primer used for PCR amplification of a fragment of the

lipase

111 gene

113 <220> FEATURE:

114 <221> NAME/KEY: misc_feature

115 <222> LOCATION: (6)..(6)

116 <223> OTHER INFORMATION: "n" can be a or t/u or g or c

119 <220> FEATURE:

120 <221> NAME/KEY: misc_feature

121 <222> LOCATION: (12)..(12)

122 <223> OTHER INFORMATION: "n" can be a or t/u or g or c

125 <400> SEQUENCE: 5

Wt-> 126 carytnttyg cncartgg 18

129 <210> SEQ ID NO: 6

130 <211> LENGTH: 17

131 <212> TYPE: DNA

132 <213> ORGANISM: Artificial Sequence

134 <220> FEATURE:

135 <223> OTHER INFORMATION: PCR primer used for PCR amplification of a fragment of the

lipase

136 gene

138 <400> SEQUENCE: 6

139 gcvgchswyt cccavgc 17

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142 <210> SEQ ID NO: 7
143 <211> LENGTH: 317
144 <212> TYPE: DNA
145 <213> ORGANISM: Aspergillus tubingensis
147 <400> SEQUENCE: 7
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150 tccaacttga catgcacggc caacgcctgt ccatcagtcg aggaggccag taccacgatg      120
152 ctgctggagt tcgacctgta tgtcactcag atcgcagaca tagagcacag ctaattgaac      180
154 aggacgaacg acttttggag gcacagccgg tttcctggcc gcggacaaca ccaacaagcg      240
156 gctcgtggtc gccttcgggg gaagcagcac gattgagaac tggattgcta atcytgactt      300
158 catcctggga gataacg                                     317
161 <210> SEQ ID NO: 8
162 <211> LENGTH: 1045
163 <212> TYPE: DNA
164 <213> ORGANISM: Aspergillus tubingensis
166 <400> SEQUENCE: 8
167 atgttctctg gacggttttg agtgcttttg acagcgcttg ctgcgctggg tgctgccgcg      60
169 cgggcaccgc ttgctgtgcg gagttaggtg gcccgatgtg agatggttgg atagcactga      120
171 tgaagggtga ataggtgtct cgacttcac gttggatgag ttgcaattgt tcgcgcaatg      180
173 tctgcccga gcttattgct cgaataatat cgactcgaaa gactccaact tgacatgcac      240
175 ggccaacgcc tgtccatcag tcgaggaggc cagtaccacg atgctgctgg agttcgacct      300
177 gtatgtcact cagatcgcag acatagagca cagctaattt gaacaggacg aacgactttg      360
179 gaggcacagc cggtttcttg gccgcggaca acaccaacaa gcggctcgtg gtcgccttcc      420
181 ggggaagcag cagcattgag aactggattg ctaatcttga cttcatcctg gaagataacg      480
183 acgacctctg caccggctgc aagggtccata ctggtttctg gaaggcatgg gagtccgctg      540
185 ccgacgaact gacgagcaag atcaagtctg cgatgagcac gtattcgggc tataccctat      600
187 acttcaccgg gcacagtttg ggcggcgcgt tggctacgct gggagcgaca gttctgcgaa      660
189 atgacggata tagcgttgag ctggtgagtc cttcaciaaag gtgatggagc gacaatcggg      720
191 aacagacagt caatagtaca cctatggatg tctcgaatc ggaaactatg cgtggtgga      780
193 gcataatcacc agtcagggat ctggggccaa cttcctgtgt acacacttga acgacatcgt      840
195 ccccggtg ccaccatgg acttttgatt cagtcagcca agtccggaat actggatcac      900
197 cagtggcaat ggagccagtg tcacggcgtc ggatatcgaa gtcacgagg gaatcaattc      960
199 aacggcgggg aatgcaggcg aagcaacggg gagcgttgtg gtcacttgt ggtacttttt      1020
201 tgcgatttcc gagtgcctgc tataa                                     1045
204 <210> SEQ ID NO: 9
205 <211> LENGTH: 297
206 <212> TYPE: PRT
207 <213> ORGANISM: Aspergillus tubingensis
209 <400> SEQUENCE: 9
211 Met Phe Ser Gly Arg Phe Gly Val Leu Leu Thr Ala Leu Ala Leu
212 1 5 10 15
215 Gly Ala Ala Ala Pro Ala Pro Leu Ala Val Arg Ser Val Ser Thr Ser
216 20 25 30
219 Thr Leu Asp Glu Leu Gln Leu Phe Ala Gln Trp Ser Ala Ala Ala Tyr
220 35 40 45
223 Cys Ser Asn Asn Ile Asp Ser Lys Asp Ser Asn Leu Thr Cys Thr Ala
224 50 55 60
227 Asn Ala Cys Pro Ser Val Glu Glu Ala Ser Thr Thr Met Leu Leu Glu
228 65 70 75 80

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231 Phe Asp Leu Thr Asn Asp Phe Gly Gly Thr Ala Gly Phe Leu Ala Ala
232      85      90      95
235 Asp Asn Thr Asn Lys Arg Leu Val Val Ala Phe Arg Gly Ser Ser Thr
236      100      105      110
239 Ile Glu Asn Trp Ile Ala Asn Leu Asp Phe Ile Leu Glu Asp Asn Asp
240      115      120      125
243 Asp Leu Cys Thr Gly Cys Lys Val His Thr Gly Phe Trp Lys Ala Trp
244      130      135      140
247 Glu Ser Ala Ala Asp Glu Leu Thr Ser Lys Ile Lys Ser Ala Met Ser
248 145      150      155      160
251 Thr Tyr Ser Gly Tyr Thr Leu Tyr Phe Thr Gly His Ser Leu Gly Gly
252      165      170      175
255 Ala Leu Ala Thr Leu Gly Ala Thr Val Leu Arg Asn Asp Gly Tyr Ser
256      180      185      190
259 Val Glu Leu Tyr Thr Tyr Gly Cys Pro Arg Ile Gly Asn Tyr Ala Leu
260      195      200      205
263 Ala Glu His Ile Thr Ser Gln Gly Ser Gly Ala Asn Phe Arg Val Thr
264      210      215      220
267 His Leu Asn Asp Ile Val Pro Arg Val Pro Pro Met Asp Phe Gly Phe
268 225      230      235      240
271 Ser Gln Pro Ser Pro Glu Tyr Trp Ile Thr Ser Gly Asn Gly Ala Ser
272      245      250      255
275 Val Thr Ala Ser Asp Ile Glu Val Ile Glu Gly Ile Asn Ser Thr Ala
276      260      265      270
279 Gly Asn Ala Gly Glu Ala Thr Val Ser Val Val Ala His Leu Trp Tyr
280      275      280      285
283 Phe Phe Ala Ile Ser Glu Cys Leu Leu
284      290      295
287 <210> SEQ ID NO: 10
288 <211> LENGTH: 392
289 <212> TYPE: PRT
290 <213> ORGANISM: Rhizopus delamar
292 <400> SEQUENCE: 10
294 Met Val Ser Phe Ile Ser Ile Ser Gln Gly Val Ser Leu Cys Leu Leu
295 1      5      10      15
298 Val Ser Ser Met Met Leu Gly Ser Ser Ala Val Pro Val Ser Gly Lys
299      20      25      30
302 Ser Gly Ser Ser Asn Thr Ala Val Ser Ala Ser Asp Asn Ala Ala Leu
303      35      40      45
306 Pro Pro Leu Ile Ser Ser Arg Cys Ala Pro Pro Ser Asn Lys Gly Ser
307      50      55      60
310 Lys Ser Asp Leu Gln Ala Glu Pro Tyr Asn Met Gln Lys Asn Thr Glu
311 65      70      75      80
314 Trp Tyr Glu Ser His Gly Gly Asn Leu Thr Ser Ile Gly Lys Arg Asp
315      85      90      95
318 Asp Asn Leu Val Gly Gly Met Thr Leu Asp Leu Pro Ser Asp Ala Pro
319      100      105      110
322 Pro Ile Ser Leu Ser Ser Ser Thr Asn Ser Ala Ser Asp Gly Gly Lys
323      115      120      125

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326 Val Val Ala Ala Thr Thr Ala Gln Ile Gln Glu Phe Thr Lys Tyr Ala
327      130      135      140
330 Gly Ile Ala Ala Thr Ala Tyr Cys Arg Ser Val Val Pro Gly Asn Lys
331 145      150      155      160
334 Trp Asp Cys Val Gln Cys Gln Lys Trp Val Pro Asp Gly Lys Ile Ile
335      165      170      175
338 Thr Thr Phe Thr Ser Leu Leu Ser Asp Thr Asn Gly Tyr Val Leu Arg
339      180      185      190
342 Ser Asp Lys Gln Lys Thr Ile Tyr Leu Val Phe Arg Gly Thr Asn Ser
343      195      200      205
346 Phe Arg Ser Ala Ile Thr Asp Ile Val Phe Asn Phe Ser Asp Tyr Lys
347      210      215      220
350 Pro Val Lys Gly Ala Lys Val His Ala Gly Phe Leu Ser Ser Tyr Glu
351 225      230      235      240
354 Gln Val Val Asn Asp Tyr Phe Pro Val Val Gln Glu Gln Leu Thr Ala
355      245      250      255
358 His Pro Thr Tyr Lys Val Ile Val Thr Gly His Ser Leu Gly Gly Ala
359      260      265      270
362 Gln Ala Leu Leu Ala Gly Met Asp Leu Tyr Gln Arg Glu Pro Arg Leu
363      275      280      285
366 Ser Pro Lys Asn Leu Ser Ile Phe Thr Val Gly Gly Pro Arg Val Gly
367      290      295      300
370 Asn Pro Thr Phe Ala Tyr Tyr Val Glu Ser Thr Gly Ile Pro Phe Gln
371 305      310      315      320
374 Arg Thr Val His Lys Arg Asp Ile Val Pro His Val Pro Pro Gln Ser
375      325      330      335
378 Phe Gly Phe Leu His Pro Gly Val Glu Ser Trp Ile Lys Ser Gly Thr
379      340      345      350
382 Ser Asn Val Gln Ile Cys Thr Ser Glu Ile Glu Thr Lys Asp Cys Ser
383      355      360      365
386 Asn Ser Ile Val Pro Phe Thr Ser Ile Leu Asp His Leu Ser Tyr Phe
387      370      375      380
390 Asp Ile Asn Glu Gly Ser Cys Leu
391 385      390
394 <210> SEQ ID NO: 11
395 <211> LENGTH: 363
396 <212> TYPE: PRT
397 <213> ORGANISM: Rhizomucor miehei
399 <400> SEQUENCE: 11
401 Met Val Leu Lys Gln Arg Ala Asn Tyr Leu Gly Phe Leu Ile Val Phe
402 1      5      10      15
405 Phe Thr Ala Phe Leu Val Glu Ala Val Pro Ile Lys Arg Gln Ser Asn
406      20      25      30
409 Ser Thr Val Asp Ser Leu Pro Pro Leu Ile Pro Ser Arg Thr Ser Ala
410      35      40      45
413 Pro Ser Ser Ser Pro Ser Thr Thr Asp Pro Glu Ala Pro Ala Met Ser
414      50      55      60
417 Arg Asn Gly Pro Leu Pro Ser Asp Val Glu Thr Lys Tyr Gly Met Ala
418 65      70      75      80

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/040,394

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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 22
Seq#:4; N Pos. 9,12,18
Seq#:5; N Pos. 6,12
Seq#:13; N Pos. 10
Seq#:13; Xaa Pos. 20,95,99
Seq#:14; Xaa Pos. 20
Seq#:17; Xaa Pos. 4
Seq#:18; N Pos. 3
Seq#:20; Xaa Pos. 22